

Work Order ID 102844

June-12-13 9:15:14 AM

102844

Page 1

Accept

N900040100

Setup Start

NS1

Item ID:

D3264-1

Revision ID:

Item Name: Bracket

Start Date: 6/11/13

Start Qty: 8.00

Required Date: 6/11/13

Req'd Qty: 8.00

R

Cust Item ID:

Customer:

NS2

Reference:

Approvals:

Process Plan: M.F.

Date: 6-6-12

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

NR1

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan
Code

Accept Qty

Reject Qty

Reject Number Insp.
Stamp

Draw Nbr

Revision Nbr

D3264

Rev A

100

0.00

100

Band saw

Memo

Jespia Bandsaw

CUT BLANK 5.700" LONG

0.00

D45
02 21 13-07-02 (x8)

110

110

HAAS 1

HAAS CNC vertical machine #1

Memo

MACHINE AS PER FOLIO FA447

FOLIO REV: A

DWG REV: A

DEBURR AS PER DWG

0.00

D45
02 21 13-07-06 (x8)

SEE -
PTO 8/28
13.07.06

(PTO) A

Work Order: <u>102844</u>	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input checked="" type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS Skid-tube Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube Small Fab <input type="checkbox"/> Finishing Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> Engineering Quality <input type="checkbox"/> Other <input type="checkbox"/>
Part No. <u>D 3264-1</u>		
NCR No. <u>13-2837</u>		

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design Doc/Data	13.07.08	28	x 8	Top edges of 2.525 rad slightly bent from tightening of the vise	DAU 13.07.08	THIS WILL NOT PRESENT THE CARBIDE FROM SITUATION PLACED INTO THE BRACKET.	21.07.08	OAS 16 9-10	OAS 16 9-10
Equip/Tooling		110		QC Tooling issue / lack of better tooling holdly Drive				13/07/08	13/07/08
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

Landing Gear		General		FAULT CATEGORY				
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Folio/Program	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Pressure/Forced				
<input type="checkbox"/> Centre Not Concentric	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Grain	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Set-up				
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damage/Defect	<input type="checkbox"/> Hardware	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Temperature/Cure				
<input type="checkbox"/> Crimp/Kink/Ripple/Wave	<input type="checkbox"/> Burrs	<input type="checkbox"/> Inspection Incomplete/Unqualified	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Weld				
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Moved	<input type="checkbox"/> Wrong Stock Pulled				
<input type="checkbox"/> Crushing	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misaligned/off center	<input type="checkbox"/> Positioned Wrong	<input type="checkbox"/> Other				
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Power Loss/Surge					
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Drawing	<input type="checkbox"/> Misread						
<input type="checkbox"/> Marks/Chatter	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Off-set						
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Calibration						
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Fit/Function	<input type="checkbox"/> Out of Sequence						

Work Order ID 102844

June-12-13 9:13:15 AM

102844

Page 2

Item ID: D3264-1

Revision ID:

Item Name: Bracket

Start Date: 6/11/13

Required Date: 6/11/13

Reference:

Accept

N9000040100

Setup Start

NS1

Stop

NS2

Cust Item ID:

Customer:

R

R

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation/
Description

Set Up/
Run Hours

Tool ID Tool # Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

QC2-Inspect parts off machine FAI/FAIB

0.00

DAS

13-07-06

120

Memo

0.00

Quality Control

130

QC8-Inspect parts - second check

0.00

130

Memo

0.00

13/07/08

8

DAS
08
9-08

Quality Control

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

Memo

0.00

Hand Finish

Hand Finishing

8 16/13-2-5

Work Order ID 102844

102844

June-12-13 9:15:15 AM

Item ID: D3264-1

Accept

N9000240100

Setup Start

NS1

Revision ID:

Item Name: Bracket

Stop

NS2

Start Date: 6/11/13

Start Qty: 8.00

8

Cust Item ID:

Required Date: 6/11/13

Req'd Qty: 8.00

8

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan
Code

Accept
Qty

Reject
Qty

Reject
Number Insp.
Stamp

150 White Glass(Ref:4.3.5.1) per QSI005 4.3-Alum

150

Powdercoat

Memo

0.00

Start Time: 7:50

8x d m-f 13/07/10

Powder Coating

W1125622

160

QC3 - Inspect Part Finish

160

QC

Memo

0.00

Quality Control

8x d m-f 13/07/10

170

Identity as per dwg & Stock Location: 81484

170

Packaging

Memo

0.00

Packaging

8x

13-8-10

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____			DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>														
Root Cause Design <input type="checkbox"/> Doc/Data <input type="checkbox"/> Equip/Tooling <input type="checkbox"/> Handling/Pre <input type="checkbox"/> Material <input type="checkbox"/> Operator <input type="checkbox"/> Offset/Setup <input type="checkbox"/> Process <input type="checkbox"/> Supplier <input type="checkbox"/> Training <input type="checkbox"/> Transport <input type="checkbox"/> Unapproved <input type="checkbox"/>	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector										
FAULT CATEGORY																			
Landing Gear Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube <input type="checkbox"/>					General Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function <input type="checkbox"/>					Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/>					Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other <input type="checkbox"/>				

Work Order ID 102844

102844

June-12-13 9:15:15 AM

Item ID: D3264-1

Accept

N9000240100

Setup Start

NS1

Revision ID:

Item Name: Bracket

Stop *NS2*

Start Date: 6/11/13

Start Qty: 8.00

R

Cust Item ID:

Required Date: 6/11/13

Req'd Qty: 8.00

R

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start Stop

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool # Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

QC21 - Final Inspection - Work Order Release

0.00

1RN

Memo

0.00

Quality Control

11B-07-10

13/7/11

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS			
Part No. _____				Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>		Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>			
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									
FAULT CATEGORY									
Landing Gear					General				
<input type="checkbox"/> Bending				<input type="checkbox"/> Bend		<input type="checkbox"/> Folio/Program		<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Pressure/Forced
<input type="checkbox"/> Centre Not Concentric				<input type="checkbox"/> BOM/Route		<input type="checkbox"/> Grain		<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Set-up
<input type="checkbox"/> Cracks				<input type="checkbox"/> Broken/Damage/Defect		<input type="checkbox"/> Hardware		<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Temperature/Cure
<input type="checkbox"/> Crimp/Kink/Ripple/Wave				<input type="checkbox"/> Burrs		<input type="checkbox"/> Inspection Incomplete/Unqualified		<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Weld
<input type="checkbox"/> Cuffs				<input type="checkbox"/> Contamination		<input type="checkbox"/> Instructions Incomplete/Unclear		<input type="checkbox"/> Part Moved	<input type="checkbox"/> Wrong Stock Pulled
<input type="checkbox"/> Crushing				<input type="checkbox"/> Countersink		<input type="checkbox"/> Misaligned/off center		<input type="checkbox"/> Positioned Wrong	<input type="checkbox"/> Other
<input type="checkbox"/> Heat Treat				<input type="checkbox"/> Cut Too Short		<input type="checkbox"/> Mislabeled		<input type="checkbox"/> Power Loss/Surge	
<input type="checkbox"/> Inspection Strip in Tube				<input type="checkbox"/> Drawing		<input type="checkbox"/> Misread			
<input type="checkbox"/> Marks/Chatter				<input type="checkbox"/> Drill Holes		<input type="checkbox"/> Off-set			
<input type="checkbox"/> Turning Sequence				<input type="checkbox"/> Finish		<input type="checkbox"/> Out of Calibration			
<input type="checkbox"/> Wave/Twist in Tube				<input type="checkbox"/> Fit/Function		<input type="checkbox"/> Out of Sequence			

Picklist Print

June-12-13 9:15:14 AM

Work Order ID: 102844

Parent Item: 03264-1

Parent Item Name: Bracket

Start Date: 6/11/13

Required Date: 6/11/13

Start Qty: 8.00

Required Qty: 8.00

Comments: I/P A04.09.02New IssueKJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B1.250X04.500		Purchased	No					3.2534		4			

Location

Loc Qty

Loc Code

MAT004
112628
121380
126160
K 4

24 13 04-02

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

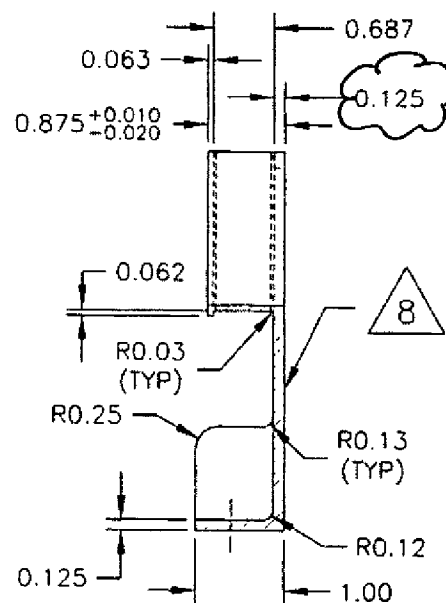
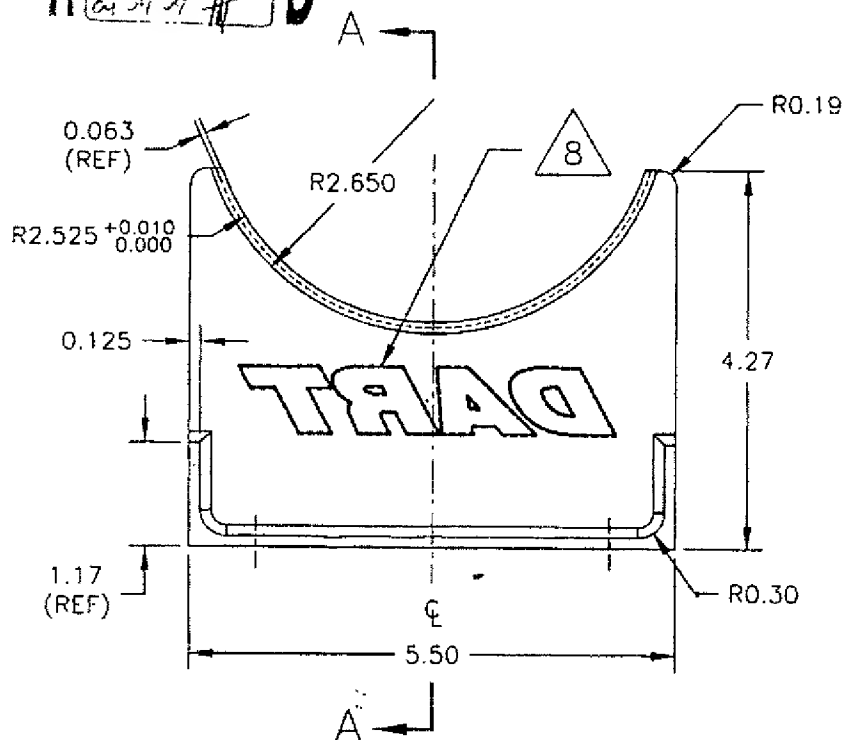
Work Order update only ☐

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS				
Part No. _____			Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>		Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									
FAULT CATEGORY									
Landing Gear					General				
<input type="checkbox"/> Bending					<input type="checkbox"/> Bend				<input type="checkbox"/> Folio/Program
<input type="checkbox"/> Centre Not Concentric					<input type="checkbox"/> BOM/Route				<input type="checkbox"/> Grain
<input type="checkbox"/> Cracks					<input type="checkbox"/> Broken/Damage/Defect				<input type="checkbox"/> Hardware
<input type="checkbox"/> Crimp/Kink/Ripple/Wave					<input type="checkbox"/> Burrs				<input type="checkbox"/> Inspection Incomplete/Unqualified
<input type="checkbox"/> Cuffs					<input type="checkbox"/> Contamination				<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Crushing					<input type="checkbox"/> Countersink				<input type="checkbox"/> Misaligned/off center
<input type="checkbox"/> Heat Treat					<input type="checkbox"/> Cut Too Short				<input type="checkbox"/> Mislabeled
<input type="checkbox"/> Inspection Strip in Tube					<input type="checkbox"/> Drawing				<input type="checkbox"/> Misread
<input type="checkbox"/> Marks/Chatter					<input type="checkbox"/> Drill Holes				<input type="checkbox"/> Off-set
<input type="checkbox"/> Turning Sequence					<input type="checkbox"/> Finish				<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Wave/Twist in Tube					<input type="checkbox"/> Fit/Function				<input type="checkbox"/> Out of Sequence
									<input type="checkbox"/> Outside Dimensions
									<input type="checkbox"/> Over/Under tolerance
									<input type="checkbox"/> Part Incorrect
									<input type="checkbox"/> Part Lost/Missing
									<input type="checkbox"/> Part Moved
									<input type="checkbox"/> Positioned Wrong
									<input type="checkbox"/> Power Loss/Surge
									<input type="checkbox"/> Pressure/Forced
									<input type="checkbox"/> Set-up
									<input type="checkbox"/> Temperature/Cure
									<input type="checkbox"/> Weld
									<input type="checkbox"/> Wrong Stock Pulled
									<input type="checkbox"/> Other

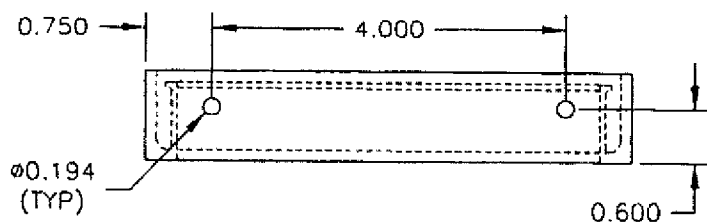


DESIGN 1/1	DRAWN BY 1/1	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED 1/1	APPROVED 1/1	DRAWING NO. D3264	REV. A SHEET 1 OF 1
DATE 04.04.20		TITLE BRACKET	SCALE 1:2
A	04.04.20	NEW ISSUE	

RELEASED
04.04.20



SECTION A-A



D3264-1 BRACKET

D3264-1:

- 1) MATERIAL: 6061-T6/T651 (QQ-A-200/8 OR QQ-A-225/8) (REF. DART SPEC. M6061T6B)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 6) PART IS SYMMETRIC ABOUT CENTERLINE
- 7) IDENTIFY WITH DART P/N & B/N USING FINE POINT PERMANENT MARKER
- 8) ENGRAVE DART LOGO AS SHOWN USING 0.75 HIGH x 0.010 DEEP (MAX) LETTERS WITH (MIN) TOOL RADIUS OF 0.25

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DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS			
Part No. _____				Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>		Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>			
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									
FAULT CATEGORY									
Landing Gear					General				
<input type="checkbox"/> Bending				<input type="checkbox"/> Bend		<input type="checkbox"/> Folio/Program		<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Pressure/Forced
<input type="checkbox"/> Centre Not Concentric				<input type="checkbox"/> BOM/Route		<input type="checkbox"/> Grain		<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Set-up
<input type="checkbox"/> Cracks				<input type="checkbox"/> Broken/Damage/Defect		<input type="checkbox"/> Hardware		<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Temperature/Cure
<input type="checkbox"/> Crimp/Kink/Ripple/Wave				<input type="checkbox"/> Burrs		<input type="checkbox"/> Inspection Incomplete/Unqualified		<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Weld
<input type="checkbox"/> Cuffs				<input type="checkbox"/> Contamination		<input type="checkbox"/> Instructions Incomplete/Unclear		<input type="checkbox"/> Part Moved	<input type="checkbox"/> Wrong Stock Pulled
<input type="checkbox"/> Crushing				<input type="checkbox"/> Countersink		<input type="checkbox"/> Misaligned/off center		<input type="checkbox"/> Positioned Wrong	
<input type="checkbox"/> Heat Treat				<input type="checkbox"/> Cut Too Short		<input type="checkbox"/> Mislabeled		<input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Other
<input type="checkbox"/> Inspection Strip in Tube				<input type="checkbox"/> Drawing		<input type="checkbox"/> Misread			
<input type="checkbox"/> Marks/Chatter				<input type="checkbox"/> Drill Holes		<input type="checkbox"/> Off-set			
<input type="checkbox"/> Turning Sequence				<input type="checkbox"/> Finish		<input type="checkbox"/> Out of Calibration			
<input type="checkbox"/> Wave/Twist in Tube				<input type="checkbox"/> Fit/Function		<input type="checkbox"/> Out of Sequence			

DART AEROSPACE LTD		Work Order: 10284
Description: Bracket		Part Number: D3264-1
Inspection Dwg: D3264	Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.687	+/-0.010	.690	✓		vern	25-4
0.063	+/-0.010	.061	✓			
0.125	+/-0.010	.117	✓			
0.875	+0.010/-0.020	.879	✓			
0.062	+/-0.010	.061	✓			
R0.03	+/-0.030	.030	✓			
R0.13	+/-0.030	.130	✓			
1.00	+/-0.030	1.004	✓			
0.125	+/-0.010	.124	✓			
0.600	+/-0.010	.600	✓			
4.000	+/-0.005	3.998	✓			
0.750	+/-0.010	.750	✓			
Ø0.194	+0.005/-0.000	.195	✓			
5.50	+/-0.030	5.500	✓			
0.125	+/-0.010	.125	✓			
0.063	+/-0.010	.063	✓			
R0.25	+/-0.030	.220	✓			
4.27	+/-0.030	4.269	✓			
R0.30	+/-0.030	.300	✓			

Measured by: ZT
Date: 13-07-06

Audited by: D.A. DAS
Date: 13/07/08

Prototype Approval:	N/A
Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.09.03	New Issue	KJ/JLM	
B	05.04.26	Ø0.194 was Ø0.208; dimensions removed	KJ/JLM	
C	07.10.10	Tolerance for 0.875 revised	KJ/EC/DD	

DQA: _____ Date: _____

QA Closed: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

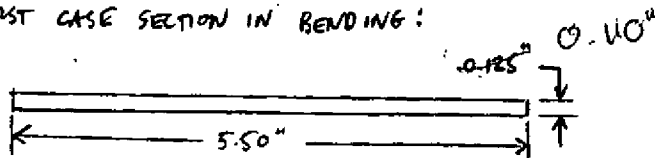

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>				AGAINST DEPARTMENT/PROCESS Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermofforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>			
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Design											
Doc/Data											
Equip/Tooling											
Handling/Pre											
Material											
Operator											
Offset/Setup											
Process											
Supplier											
Training											
Transport											
Unapproved											

FAULT CATEGORY									
Landing Gear					General				
<input type="checkbox"/> Bending	<input type="checkbox"/> Centre Not Concentric	<input type="checkbox"/> Cracks	<input type="checkbox"/> Crimp/Kink/Ripple/Wave	<input type="checkbox"/> Cuffs	<input type="checkbox"/> Crushing	<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Marks/Chatter	<input type="checkbox"/> Turning Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Bend	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Broken/Damage/Defect	<input type="checkbox"/> Burrs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Countersink	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Drawing	<input type="checkbox"/> Drill Holes
<input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program	<input type="checkbox"/> Grain	<input type="checkbox"/> Hardware	<input type="checkbox"/> Inspection Incomplete/Unqualified	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Misaligned/off center	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Misread	<input type="checkbox"/> Off-set
<input type="checkbox"/>	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Part Moved	<input type="checkbox"/> Positioned Wrong	<input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/> Pressure/Forced	<input type="checkbox"/> Set-up	<input type="checkbox"/> Temperature/Cure	<input type="checkbox"/> Weld	<input type="checkbox"/> Wrong Stock Pulled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. SR- D412-706-1	REV. A SHEET 5 OF 5
DATE 04.10.27	TITLE STRESS REPORT		SCALE N/A
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3.3 D3264-1 BRACKET ANALYSIS

a) WORST CASE SECTION IN BENDING:



$$I = \frac{1}{12} b h^3 = \left(\frac{1}{12}\right)(5.50)(0.125)^3 = 0.000895 \text{ in}^4$$

$$c = 0.0625 \text{ in}$$

$$M = 350 \text{ in-lb (SEE SECTION 3.1)}$$

$$\sigma = M c / I = (350)(0.0625) / 0.000895 = 24.4 \text{ ksi}$$

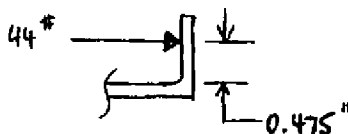
$$F_{tu} = 38 \text{ ksi (FOR QQ-A-200/8)}$$

$$MS = 38 / 24.4 - 1 = 0.56 \leftarrow \text{OK } 0.66$$

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b) LOCALIZED LOADING:



HIGHEST BOLT LOAD = 44 * (SEE SECTION 3.2)
CONSIDER LOAD ACTS OVER A WIDTH OF 4D = 0.76"

$$\therefore I = \frac{1}{12} b h^3 = \frac{1}{12} (0.76)(0.125)^3 = 0.000124 \text{ in}^4$$

$$c = 0.063 \text{ in}$$

$$M = (44)(0.475) = 21 \text{ in-lb}$$

$$\sigma = M c / I = (21)(0.063) / 0.000124 = 10.7 \text{ ksi}$$

$$F_{tu} = 38 \text{ ksi (FOR QQ-A-200/8)}$$

$$MS = 38 / 10.7 - 1 = 2.6 \leftarrow \text{OK}$$

